BY ORDER OF THE
SECRETARY OF THE AIR FORCE

AFMS 38AS
11 January 1996

Manpower Standard

BASE AND INSTALLATION SECURITY SYSTEMS (BISS) MAINTENANCE

This Air Force Manpower Standard (AFMS) quantifies the manpower required to accomplish the tasks described in the process-oriented description (POD) for varying levels of workload. The Television and Intrusion Detection Systems Maintenance career field provides test and repair capability for BISS. This system consists of a myriad of electronic and photo/optical device combinations that provide electronic surveillance, detection, and identification of intruders augmenting and reducing man-oriented security defense methods. This AFMS provides the manpower to support a BISS maintenance function except for the following: Combat Communications units, detachments (dets), and operating locations (Ols); Air Force Reserve and Air National Guard units; Air Force Space Command units; and locations undergoing cost comparison studies will be exempt from standard application. This standard does not apply to locations that have completed a cost comparison study and remained in-house. This standard applies to peacetime and wartime operations. The 21-series of Air Force directives contain USAF policy and procedural guidance for the BISS Maintenance work center. This AFMS was developed in accordance with policies and procedures contained in AFI 38-201, *Determining Manpower Requirements*. Send comments and suggested improvements on AF Form 847**, Recommendation for Change of Publication**, through channels, to AFMEA/AEDA, 550 E Street East, Randolph AFB, Texas 78150-4451.

1. Core Composition. N/A.

2. Standard Data:

2.1. **Approval Date.** July 1995

2.2. **Man-hour Data Source.** Operational Audit employing historical record, directed requirement, and technical estimate.

2.3. **Standard Equation.** Yc = 158.894 + 10.0617 (X).

2.4. **Workload Factor (WLF):**
2.4.1. **Title.** Total Number of Sensored Structures and Sectors.
2.4.2. **Definition.** The total number of structures with interior intrusion detection sensors plus the total number of sectors on a perimeter fence with exterior intrusion detection sensors. In determining structures for Maintenance and Inspection facilities, count the number of bays sensored within the facility. Entry Control Points and Taxigaps each count as one sector. Count each Permanent Individual Resource Protection System (PIRPS) configuration as one sector.
2.4.3. **Source.** Communications-Computer Installation Records maintained by the local communications unit. Count one for each sector regardless of the number of sector subdivisions. This definition is not dependent on the number of sensors employed within that sector, but rather the number of sectors maintained. For PIRPS, each sensored individual resource counts as one sector. For example, seven aircraft stubs equal seven sectors. For structures, count one for each sensored structure or bay maintained, regardless of the type or number of sensors installed.

2.5. **Points of Contact:**
2.5.1. **Functional Representatives.** CMSgt Michael Peters, HQ USAF/LGMM, DSN 227-5642; CMSgt Jode Hughes, HQ AFC4A/SYYM, DSN 576-2182; and MSgt George Dierkens, HQ AFC4A/SYND, DSN 576-3577
2.5.2. **AFMEA Representative.** Mr. Glen Craft, AFMEA/AEDA, DSN 487-2479

3. Application Instructions:

OPR: AFMEA/AEDA (Mr. Glen Craft)
Certified by: AFMEA/AED (Lt Col Terry Holtz)

Pages: 9/Distribution: F

3.1. A Price Tagging Matrix has been developed to facilitate application at locations where the peacetime military normal Man-hour Availability Factor (MAF) applies. The manpower equation must be computed for wartime application, extended overseas work week locations, or if additive workload is credited to the work center.
3.1.1. **Step 1.** Determine the total number of structures and sectors following the instructions in paragraph 3.4.
3.1.2. **Step 2.** When using the Price Tagging Matrix at Attachment 4, find the range of structures and sectors that corresponds with the count obtained in Step 1. Directly to the right is the manpower required by grade.
3.1.2.1. When using the equation, substitute the count from Step 1 for X in the equation and compute. Then divide the computed man-hours by the appropriate MAF multiplied by its overload factor. For example, the procedures for the extended overseas MAF would be:

COMPUTED MAN-HOURS
1.04 x 185.7

3.1.2.2. All results should be rounded up to the next whole authorization. MAFs are found in AFI 38-201 for US Military and Civilian personnel, and USAFE and PACAF supplements to AFI 38-201 for Foreign National Civilians.

3.2. AFI 38-201 contains the basic policies for identifying when manpower must be military or civilian.

3.3. The application of the standard identifies "required grades." The "authorized grades" are allocated based on USAF Career Progression Group (CPG) constraints. Refer to the standard manpower table for the skill and grade distribution for the computed requirement.

3.4. If a request is made to change an AFSC, compliance with AFI 38-201 is mandatory concerning the Unsatisfactory Rotation Index (URI) and Wartime Critical Military Skills (WCMS) Programs. Positions having AFSCs appearing on the URI list should be authorized as military in the CONUS and civilian overseas unless the overseas positions are military essential according to AFI 38-201. AFSCs on the WCMS list should be military due to wartime requirements.

3.5. The standard is valid through the man-hour range of 158.89 through 2462.49. Extrapolation limits represent the upper and lower man-hour values that bind the applicability range. These limits represent the maximum amount an equation can be extended. Exception man-hours may exceed the extrapolation limits when added to the man-hours from the basic manpower equation.

4. Statement of Conditions. This work center has conditions existing that impact the work center's ability to perform tasks in the POD. These conditions are listed below:

4.1. **Climatic Conditions:**
4.1.1. **Temperature.** At northern tier locations cold temperature could cause maintenance activities to slow down considerably. Therefore, the frequencies of tasks affected would increase during summer months.
4.1.2. **Snow and Ice.** Snow and ice in northern tier bases cause the frequency of tasks to vary from the norm.
4.1.3. **Severe Weather.** High winds, lightning, and thunderstorms may cause an increase in maintenance.

4.2. **Physical Layout of Facilities.** The work center itself is generally not located with the equipment it services. Travel time is necessary to accomplish direct categories of work. Climatic conditions may affect travel time.

4.3. **Physical Condition of Facilities.** The age of the equipment directly impacts the frequency of the unscheduled maintenance categories of work.

4.4. **Access to Controlled Areas.** The majority of BISS equipment is in controlled areas. Delays may be encountered awaiting access/escort to equipment location.

5. AFMS Development. When this standard was developed based on the work center maintaining sensored structures and sensored sectors, both old and new type sensors were measured to determine

manpower needed for this function. Therefore, variances will not be considered for equipment based solely on the equipment being old or new.

BENJAMIN N. CHAPMAN, Lt Col, USAF
Chief, Plans & Productivity Division

Attachments
1. Process Oriented Description
2. Standard Manpower Table
3. Variance
4. Price Tagging Matrix

PROCESS ORIENTED DESCRIPTION

BASE AND INSTALLATION SECURITY SYSTEMS (BISS) MAINTENANCE

A1.1. SCHEDULED MAINTENANCE:

A1.1.1. PERFORMS PREVENTIVE MAINTENANCE INSPECTION (PMI). Obtains and reviews schedule. Coordinates equipment downtime and other pertinent data with appropriate agency; arranges for escort; prepares material, technical data, tools, test equipment and vehicle. Sets up test equipment, calibrates, cleans, services, inspects, performs corrosion control, and returns equipment to normal configuration. Cleans work area, records data, notifies appropriate agency of completed action, and returns material, technical data, tools, test equipment and vehicle. Performs PMI on exterior/interior intrusion detection sensor, annunciator surveillance equipment and ancillary BISS equipment. Prepares documentation and follow-on actions. Performs corrosion control and inputs data into Core Automated Maintenance System (CAMS).

A1.1.2. ACCOMPLISHES EQUIPMENT MODIFICATION. Notifies appropriate agency; obtains and reviews directive; obtains test equipment, tools, material, and vehicle, and prepares work area. Performs equipment modification, removes, replaces, aligns, adjusts, calibrates, lubricates and cleans; and accomplishes performance check. Notifies appropriate agency of completed action, returns material, technical data, tools, test equipment and vehicle; and completes documentation. Accomplishes Time Compliance Technical Order (TCTO) and Communications-Electronics Maintenance Instruction (CEMI).

A1.1.3. PERFORMS TIME CHANGE. Notifies appropriate agency; obtains and reviews directive; obtains tools, test equipment, material, and vehicle. Prepares work area; removes/replaces time change, and accomplishes performance check. Notifies appropriate agency of completed action, returns materials, technical data, tools, test equipment and vehicle, and completes documentation. Performs time change on battery, filter, maintenance log, and on corrosion inhibitor/desiccant.

A1.1.4. ACCOMPLISHES SOFTWARE CONFIGURATION UPDATE. Notifies appropriate agency; obtains and reviews applicable directive; obtains test equipment, tools, materials, and vehicle. Prepares work area; removes and replaces obsolete software; aligns, adjusts, calibrates, and accomplishes performance check. Notifies appropriate agency of completed action, returns material, technical data, tools, test equipment and vehicle, and completes documentation.

A1.2. UNSCHEDULED MAINTENANCE:

A1.2.1. PERFORMS ON-EQUIPMENT MAINTENANCE. Responds to operator reported equipment malfunction. Gathers tools, technical data, documentation, and test equipment; obtains and prepares vehicle; and loads material onto vehicle. Unloads and sets up test equipment, troubleshoots to identify problem, and notifies Maintenance Control of problem. Obtains part; disassembles, cleans and replaces defective part; tests and adjusts system; returns equipment to normal configuration; disassembles test equipment; completes documentation; gathers tools, technical data, documentation, and test equipment, and loads material onto vehicle. Unloads tools, technical data, documentation, and test equipment; cleans and stores material; returns and signs in vehicle, and notifies Maintenance Control of completed action.

A1.2.2. PERFORMS OFF-EQUIPMENT MAINTENANCE. Reviews technical data; determines repair level; obtains tools, test equipment, and prepares work area. Troubleshoots part/Due In From Maintenance (DIFM) asset to isolate malfunction of defective part, obtains part, replaces defective part, aligns part/DIFM asset, and accomplishes performance check. Notifies appropriate agency of completed action, returns technical data, tools, test equipment, and materials. Processes Not Repairable This Station (NRTS) item; completes documentation; cleans and turns in DIFM/NRTS asset to supply. Repairs DIFM/NON-DIFM asset; performs NRTS action; and inputs documentation into CAMS.

A1.3. PERFORMS CABLE MAINTENANCE. Obtains work order; coordinates with and assists appropriate agency; obtains and reviews technical data and wiring layouts; obtains test equipment, tools, materials, and cable splice kit; loads/unloads vehicle and prepares work site. Installs/repairs interconnecting cable; accomplishes performance check; notifies appropriate agency of completed action, returns material, technical data, tools, test equipment and vehicle, and completes documentation. Repairs direct buried maid miles and cable entering field distribution boxes.

A1.4. PERFORMS MAINTENANCE ON SUPPORT EQUIPMENT. Gathers tools, technical data, and test equipment; sets up test equipment, troubleshoots to identify problem, and notifies Maintenance Control of problem. Obtains part; disassembles, cleans, and replaces defective part; tests and adjusts system; returns equipment to normal configuration; performs performance check; disassembles test equipment; returns tools, technical data, and test equipment; cleans and stores material; and notifies Maintenance Control of completed action. Repairs bench test facility (shop mock-up), test fixture, user-maintained test equipment.

A1.5. LOGISTIC SUPPORT:

A1.5.1. PROVIDES PROJECT SUPPORT. Prepares for project; receives and reviews project package; reviews cover letter, program support agreement (PSA), consolidated list of materials, related scheme, task list, and drawings/sketches; assists in site survey and provides technical assistance; identifies and documents discrepancy; and returns package to appropriate agency for corrective action. Reviews final project package, monitors installation, and assists in testing.

A1.5.2. PERFORMS MINOR INSTALLATION AND REMOVAL. Receives and reviews job to determine job requirement; coordinates with and assists appropriate agency; obtains and reviews directive; obtains test equipment, tools, material, and spare parts; loads and unloads vehicle, and prepares work area. Installs applicable new equipment; removes and installs existing local unit level equipment; resets, aligns, adjusts, calibrates, lubricates, cleans, and accomplishes performance check. Coordinates with appropriate agency; cleans work area; loads and unloads vehicle; stores tools, material, technical data, and equipment; and completes documentation.

A1.5.3. ASSISTS OUTSIDE AGENCY. Coordinates with appropriate agency for entry; provides technical assistance and escorts as necessary.

A1.5.4. REVIEWS COMMUNICATIONS-COMPUTER SYSTEM INSTALLATION RECORD (CSIR). Performs periodic and annual review of CSIR for accuracy.

A1.6. SYSTEMS CHECK:

A1.6.1. PERFORMS FIELD LEVEL TEST: Monitors post-repair test. Assists Security Police in testing of system after a maintenance repair action. Monitors periodic security check. Receives notification; accompanies and assists Security Police during periodic sensor test.

A1.6.2. ASSISTS IN NUCLEAR SURETY INSPECTION (NSI). Receives notification; coordinates with appropriate agency; gathers material, technical data, tools, and vehicle; aligns and adjusts sensor for optimum performance in preparation for Nuclear Surety Inspection/Limited Nuclear Surety Inspection; assists inspector during performance test of security system; returns material, technical data, tools, and vehicle; notifies appropriate agency of job completion; and completes documentation.

A1.**7. EQUIPMENT PARTS ACQUISITION:**

A1.7.1. ORDERS PART. Obtains applicable technical order; researches stock number and other pertinent data; orders part with a listed/non-listed national stock number (NSN); completes documentation; and submits request. Performs due-out validation; maintains bench stock and maintains forward supply point (FSP).

A1.7.2. PERFORMS FUNCTION CHECK OF FSP ASSET. Notifies appropriate agency; obtains and reviews technical data; obtains tools, test equipment and assembly; and prepares work area. Installs assembly; performs operational check; removes assembly, and restores equipment to operation. Cleans work area, stores tools, test equipment, and technical data; returns assembly to forward supply point, and completes documentation.

A1.7.3. SUBMITS DEFICIENCY REPORT. Notifies appropriate agency; prepares justification and submits report. Initiates follow-up action on supply level; and receives/turns in equipment. Submits quality deficiency report (QDR) and material deficiency report (MDR).

A1.8. MAINTENANCE STANDARDIZATION AND EVALUATION PROGRAM (MSEP):

A1.8.1. ASSISTS IN QUALITY CONTROL (QC) INSPECTION. Coordinates with and assists the QC inspector performing the inspection by providing technical assistance and performing tasks, as necessary.

A1.8.2. PERFORMS PERSONNEL EVALUATION. Receives evaluation notice; coordinates with appropriate agency; obtains tools, technical data, test equipment, and materials. Performs the task selected by the quality control inspector. Returns tools, technical data, test equipment, materials, and completes documentation. Performs primary evaluation for newly assigned personnel, follow-on evaluation and/or special evaluation.

A1.9. TRAVEL:

A1.9.1. PERFORMS TRAVEL DURING DUTY HOURS. Performs travel to and from location of equipment requiring maintenance.

A1.9.2. PERFORMS ON-CALL TRAVEL. Performs travel from domicile to place of duty to perform unscheduled maintenance after normal- duty hours and on weekends, and returns to domicile.

INDIRECT. Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are Supervision, Administration, Meetings, Training, Supply, Equipment Maintenance, and Cleanup. See AFMS 00AA for the Standard Indirect Description.

STANDARD MANPOWER TABLE

WORK CENTER/FAC	APPLICABILITY MAN-HOUR RANGE
Base And Installation Security Systems Maintenance/38AS	158.89 - 2462.49

AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Television and Intrusion Detection Sys Crftmn	2E174	MSG								1	1
Television and Intrusion Detection Sys Crftmn	2E174	TSG						1	1	1	1
Television and Intrusion Detection Sys Jrnymn	2E154	SSG	1	1	1	1	1	1	2	2	2
Television and Intrusion Detection Sys Jrnymn	2E154	SGT		1	1	2	2	2	2	2	2
Television and Intrusion Detection Sys Apr	2E134	A1C			1	1	2	2	2	2	3
TOTAL			1	2	3	4	5	6	7	8	9

AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Television and Intrusion Detection Sys Crftmn	2E174	MSG	1	1	1	1	1	1	1		
Television and Intrusion Detection Sys Crftmn	2E174	TSG	1	1	1	1	1	1	1		
Television and Intrusion Detection Sys Jrnymn	2E154	SSG	2	2	3	3	3	3	4		
Television and Intrusion Detection Sys Jrnymn	2E154	SGT	2	3	3	3	4	5	5		
Television and Intrusion Detection Sys Apr	2E134	A1C	4	4	4	5	5	5	5		
TOTAL			10	11	12	13	14	15	16		

AF Form 1113, JUN 91 (COMPUTER GENERATED). PREVIOUS EDITION IS OBSOLETE.

VARIANCES

BASE AND INSTALLATION SECURITY SYSTEMS (BISS) MAINTENANCE

A1. Title. Negative variance for travel.

A2. Definition. Provides for locations collocated within the secure areas that are serviced. Accounts for the lack of delay encountered at entry control points into secure areas.

A3. Impact. -1 per location.

A4. Applicability. Nellis AFB NV.

MANPOWER PRICE TAGGING MATRIX

BASE AND INSTALLATION SECURITY SYSTEMS (BISS) MAINTENANCE

Number of Structures and Sectors	Total Manpower Required	Grade Requirement				
		MSgt	TSgt	SSgt	Sgt	A1C
1 - 16	2			1	1	
17 - 32	3			1	1	1
33 - 48	4			1	2	1
49 - 64	5			1	2	2
65 - 80	6		1	1	2	2
81 - 96	7		1	2	2	2
97 - 111	8	1	1	2	2	2
112 - 127	9	1	1	2	2	3
128 - 143	10	1	1	2	2	4
144 - 159	11	1	1	2	3	4
160 - 175	12	1	1	3	3	4
176 - 191	13	1	1	3	3	5
192 - 207	14	1	1	3	4	5
208 - 223	15	1	1	3	5	5
224 - 239	16	1	1	4	5	5